

Ouray National Wildlife Refuge Vegetation Mapping Project

V.A.5.N.d.9. *SPOROBOLUS CRYPTANDRUS HERBACEOUS ALLIANCE*

Sand Dropseed Herbaceous Alliance

Alliance Identifier: A.1252

Sporobolus cryptandrus Great Basin Herbaceous Vegetation

Sand Dropseed Great Basin Herbaceous Vegetation

ELEMENT CONCEPT

GLOBAL SUMMARY: This plant association is described from the Uinta Basin and Colorado Plateau where it occurs on alluvial terraces of major rivers and on sand deposits on mesas and plains. Soils are loamy sands and sandy loams derived from alluvium, aeolian deposits or sandstone residuum. Sites have generally been disturbed by flooding, shifting sands, livestock grazing, or human recreation. The vegetation is dominated by the warm-season perennial graminoid *Sporobolus cryptandrus*. *Pleuraphis jamesii*, *Hesperostipa comata*, or *Equisetum variegatum* often occur in low abundance. Native forbs such as *Sphaeralcea grossulariifolia* or *Chamaesyce fendleri* may be present. The introduced annual grass *Bromus tectorum* and several other exotic species like *Bromus rigidus*, *Salsola kali*, *Helianthus annuus*, *Sisymbrium altissimum*, or *Tribulus terrestris* may be present to abundant, especially on disturbed riparian stands. Occasional *Brickellia* spp. or other shrubs may occur, but they are not dense enough to form a shrub layer.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: TERRESTRIAL

Ouray National Wildlife Refuge Environment: The plain occupied by *Sporobolus cryptandrus* Herbaceous Vegetation has sandy loam soils and abuts slightly more elevated plains supporting *Achnatherum hymenoides* Herbaceous Vegetation and *Ericameria nauseosa* Dwarf-shrubland. This site has been grazed at some time in the past, as cattle droppings are still evident.

Global Environment: This grassland is described from the Uinta Basin and Colorado Plateau where it occurs on alluvial terraces of large rivers and on sand deposits on mesas and plains. Elevation ranges from 1243-1450 m. Sites are flat to gently sloping valley bottoms, plains or plateaus. Soils are loamy sands and sandy loams derived from alluvium, aeolian deposits or sandstone residuum. Stands have generally been disturbed by flooding, shifting sands, livestock grazing, or human recreation.

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: One nearly pure stand of *Sporobolus cryptandrus* Herbaceous Vegetation is present on sandy loam soil on the western edge of the Refuge. This stand is dominated by *Sporobolus cryptandrus*, a bunchgrass that provides most of the foliar cover of approximately 20% for the stand. A small amount of *Hesperostipa comata* is also present, in addition to a few forb species. *Helianthus annuus* and *Salsola kali* are annual forbs that provide from 1-5% foliar cover over site soils. All of the plant species present on this site are disturbance tolerant and tend to increase following disturbance. This fact, the presence of cattle droppings, and the proximity of the site to a boundary fenceline would suggest a grazing history for this stand. Along the edge of this grassland type, sparse *Chrysothamnus viscidiflorus* and *Opuntia polyacantha* are present. A more mixed stand dominated by *Sporobolus cryptandrus* was observed in Wyasket Bottom; the stand included a sparse shrub component, e.g., *Sarcobatus vermiculatus*, *Artemisia spinescens*, and *Gutierrezia sarothrae*. Also present in this stand were *Bromus tectorum*, *Elymus elymoides*, *Sporobolus airoides*, and *Salsola kali*.

Global Vegetation: This plant association is found on alluvial terraces of large rivers and on sand deposits on mesas and plains. The sparse to moderately dense (10-30% cover) herbaceous layer is characterized by the dominance of the warm-season perennial graminoid *Sporobolus cryptandrus*. *Pleuraphis jamesii*, *Hesperostipa comata*, or *Equisetum variegatum* often occur in low abundance. Native forbs such as *Sphaeralcea grossulariifolia* or *Chamaesyce fendleri* typically have low cover and do not form a layer. The widespread introduced annual grass *Bromus tectorum* and several other exotic species like *Bromus rigidus*, *Salsola kali*, *Helianthus annuus*, *Sisymbrium altissimum*, or *Tribulus terrestris* may be present to abundant, especially on disturbed riparian stands. An occasional *Brickellia* spp or other shrubs may occur, but they are not dense enough to form a shrub layer. Moss is important in some stands.

Dynamics: Disturbance is present and appears to be important in the maintenance of this vegetation. *Sporobolus cryptandrus* occurs throughout the western U.S. as a minor species, occasionally becoming locally dominant in disturbed or sandy sites in the midgrass prairie (Weaver and Albertson 1956). This perennial grass produces prolific

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seeds that are long-lived in the soil (20 years), and is observed to increase in abundance on disturbed and grazing-depleted ranges (USFS 1937).

MOST ABUNDANT SPECIES

Ouray National Wildlife Refuge

Stratum	Species
GRAMINOID	<i>Sporobolus cryptandrus</i> , <i>Helianthus annuus</i> , <i>Salsola kali</i>

Global

Stratum	Species
GRAMINOID	<i>Bromus tectorum</i>
GRAMINOID	<i>Sporobolus cryptandrus</i>

CHARACTERISTIC SPECIES

Ouray National Wildlife Refuge

Species
Sporobolus cryptandrus, *Helianthus annuus*, *Salsola kali*

Global

Species
Sporobolus cryptandrus

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge

Stratum	Species
N/A	

Global

Stratum	Species
GRAMINOID	<i>Bromus tectorum</i>

GLOBAL SIMILAR ASSOCIATIONS:

Sporobolus cryptandrus Shrub Herbaceous Vegetation (CEGL001514)--similar vegetation except with significant shrub component.

Aristida purpurea var. *longiseta* - *Sporobolus cryptandrus* Herbaceous Vegetation (CEGL001515)--similar vegetation and environmental conditions except codominated by *Aristida purpurea* var. *longiseta*.

Sporobolus cryptandrus - *Poa secunda* Herbaceous Vegetation (CEGL001516)--similar vegetation and environmental conditions except codominated by *Poa secunda*.

Artemisia tridentata / *Sporobolus cryptandrus* - *Achnatherum hymenoides* Shrub Herbaceous Vegetation (CEGL001545)--similar vegetation and environmental conditions except codominated by *Poa secunda*.

Aristida purpurea var. *longiseta* - *Pseudoroegneria spicata* - *Sporobolus cryptandrus* Herbaceous Vegetation (CEGL001589)--similar vegetation and environmental conditions except codominated by *Aristida purpurea* var. *longiseta* - *Pseudoroegneria spicata*.

Ephedra viridis / *Achnatherum hymenoides* - *Sporobolus cryptandrus* Shrub Herbaceous Vegetation (CEGL001649)--sandy site grasslands with shrub layer.

Bouteloua gracilis - *Sporobolus cryptandrus* Herbaceous Vegetation (CEGL001761)--sandy site grasslands with shrub layer.

Schizachyrium scoparium - *Aristida basiramea* - *Sporobolus cryptandrus* - *Eragrostis trichodes* Herbaceous Vegetation (CEGL005221)--central Great Plains type.

SYNONYMY: N/A

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CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: The association is broadly defined to include *Sporobolus cryptandrus*-dominated stands from both riparian and sandy upland sites. This plant association is similar to the threatened, regionally endemic *Sporobolus cryptandrus* plant associations from the Columbia Basin and lower Snake River that have declined significantly due to loss of habitat from hydroelectric dam construction and conversion of land to cultivation. Many of the riparian stands in these associations are in poor condition because of past management and invasion of introduced species.

ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: Only one stand of *Sporobolus cryptandrus* Herbaceous Vegetation was observed and sampled; it occurs near the western boundary fence of the Refuge.

Global Range: The association is found on terraces of large rivers in the Colorado Plateau and likely occurs elsewhere in the southwestern U.S.

Nations: US

States/Provinces: UT

TNC Ecoregions: 10:C, 19:C

USFS Ecoregions: 313A:CC, 341C:CC

Federal Lands: NPS (Zion); USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL002691 **Confidence:** 1 **Conservation Rank:** G?

REFERENCES: Thompson 2001, USFS 1937, Von Loh 2000.